

## CLAIMS:

1. Circuit arrangement (2) for driving a display arrangement (1), the circuit arrangement (2) includes column driving means (5) for driving  $n$  column electrodes (C) and row driving means (4) for driving  $m$  row electrodes (R) of the display arrangement (1), wherein the column driving means (5) comprises  $n$  output channels (O), each  
5 output channel (O) having a column electrode (C) assigned and is arranged for providing a respective column voltage to the assigned column electrode (C), an additional output channel ( $O_R$ ) is arranged for providing respective column voltages, whereas each of the  $n$  column electrodes (C) is connectable to the additional output channel ( $O_R$ ).
- 10 2. Circuit arrangement as claimed in claim 1, wherein the  $n$  output channels (O) having switching means (S), each of the  $n$  switching means (S) is provided between an output channel (O) and its associated column electrode (C) for connecting the column electrode (C) with the additional output channel ( $O_R$ ).
- 15 3. Circuit arrangement as claimed in claim 2, wherein the switching means (S) are provided for disconnecting the output channel (O) from its column electrode (C), if the column electrode (C) is connected to the additional output channel ( $O_R$ ).
- 20 4. Circuit arrangement as claimed in claim 1, wherein at the beginning of driving a first row electrode ( $R_1$ ) of a frame the additional output channel ( $O_R$ ) is calibrated, whereas during driving the following row electrodes ( $R_2$ -  $R_m$ ) the additional output ( $O_R$ ) channel is successively connected via the respective switching means (S) to the column electrodes (C), whereas the associated output channel (O) of the column  
25 electrode (C) currently connected to the additional output channel ( $O_R$ ) is disconnected from the respective column electrode (C) for calibrating.

5. Circuit arrangement as claimed in claim 1, wherein the column driving means (5) comprises more than one additional output channel ( $O_{Rn}$ ) which are connectable to the column electrodes (C).
- 5 6. Circuit arrangement as claimed in claim 1, wherein calibration means (10) are arranged for offset cancellation of the output channels (O) connected to the calibration means (10).
- 10 7. Display device comprising a display arrangement (1) and a display driver circuit arrangement (2), the display driver circuit arrangement (2) comprises column driving means (5) for driving the n column electrodes (C) with column voltages and row driving means (4) for driving the m row electrodes (R) with row selection voltages, wherein the column driving means (5) comprises n output channels (O), each  
15 output channel (O) having a column electrode (C) assigned and is arranged for providing a respective column voltage to the assigned column electrode, an additional output channel ( $O_R$ ) is arranged for providing a column voltage, whereas each of the n column electrodes (C) is connectable to the additional output channel ( $O_R$ ).
- 20 8. Display device as claimed in claim 7, wherein the display arrangement (1) comprises a liquid crystal material between a first substrate provided with row electrodes (R) and a second substrate provided with column electrodes (C), in which overlapping parts of the row and column electrodes define pixels (8).
- 25 9. Method for driving a display arrangement (1), whereas the display arrangement (1) comprises n column electrodes (C) and m row electrodes (R), the n column electrodes (C) are driven by column driving means (5) and the row electrodes (R) are driven by row driving means (4), wherein the column driving means (5) comprises n output channels (O) each providing a respective column voltage to its  
30 associated column electrode (C), wherein an additional output channel (O) is arranged which is calibrated at the beginning of a driving procedure of a frame, wherein after the

additional output channel ( $O_R$ ) is calibrated, one of the  $n$  output channels ( $O$ ) is disconnected from its associated column electrode ( $C$ ), wherein this column electrode ( $C$ ) is connected to the calibrated additional output channel ( $O_R$ ), the calibrated additional output channel ( $O_R$ ) supplies the respective column voltage to the column  
5 electrode ( $C$ ), whereas the disconnected output channel ( $O$ ) is calibrated.